## Approved For Release 2005/11/21\_: GIA-RDP78-03576A000100020003-6

#### Addressees:

Director, National Photographic Interpretation Center Director of Foreign Missile and Space Analysis Center Director of Scientific Intelligence Director of Computer Services Director of Communications Director of Special Projects Director of ELINT Chief, Technical Services Division Training Officer, National Photographic Interpretation Center Training Officer, Foreign Missile and Space Analysis Center Training Officer, Office of Scientific Intelligence Training Officer, Office of Computer Services Training Officer, Office of Communications Training Officer, Office of Special Projects Training Officer, Office of ELINT Training Officer, Technical Services Division

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### COURSE CRITIQUE

Please rate 1-10 (poor to excellent respectively) by placing a check on the scale given. Comment below question where indicated. Use back of pages if needed.

RATING

1. Format of the course was intended to accommodate to a rough 5% time commitment and to provide for a full-day class treatment of a particular topical area. Please rate:

"ONE DAY TENDS TO BE ONE

1 day/month

4 hours/every 2 weeks

1 2 6 1 2 4

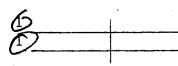
Other Alternatives:

ACCOMPLISHED OR NOT. HHOURS EVERY ZWEEKS WOULD BE
EASIER TO ARRANGE. EVEN HHOURS AFTER NORMAL WORKING HOURS WOULD
HAVE LESS IMPACT THAN A THE LOSS OF AN ENTIRE WORK DAY,
2. The point of the applications session was to illustrate where
current course material was utilized in the real world. Please
rate effectiveness:

Material relevance Applications speakers 1 4

3. The purpose of the homework was to exercise topical material with about 8 hours of work. Please rate these:

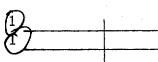
3 one-hour problems 20 ten-minute problems



HOMEWORK IS WASTE OF TIME IN OVERVIEW COURSE SUCHAS

4. The goal of the intermediate 2-hour session was to give a "keep-alive" exercise in the topical area. Please rate these alternatives for continuity:

Problem-solving session Second applications session



PROBLEM SOLVING IS OF LITTLE USE IN THIS TYPE OF COURSE. A GOOD SECOND AGENCY-APPLICATION SESSION WOULD BE MUCH MORE USEFUL.

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5. The class was intended to be we pictorial development in order to creadily. Please rate:	veighted towards a blackboard- convey modelling concepts more	
DUESN'T MATTER WHAT		_
MEDIA ISUSED AS LONG	Diagrammatio presentation Mix of vuegraphs & chalkboa	$ \begin{array}{ccc}  & 1 & \longleftarrow \\  & 1 & \longleftarrow \\ \end{array} $
AS THE STUDENT CAN SEE	E HEAR AND REFER BACK.	-
6. The symbology of various systems the separate source developments. made in order to permit cross into literature. Please rate effectiveness.	An effort at consistency was erpretation within the technical	to
	Common symbology Example illustrations	1
7. The intent of notes and handout month was to tie course topics to t  No Time to REALLY GET INTO HAME	Effectiveness of handout reprints Effectiveness of specially	e  13  1
GUOU KEFERENCES	ach Benutimu words? ame room same day/month, sam	.e
	Room Day Daily sequence	1
9. The course was designed to pre several disciplines. Please rate a	esent a semi-unitary approach to	1
Communications $\underline{\boldsymbol{q}}$ O	ptics 3 Acoustics 2 eismics 4 Pictorial	<u> </u>

\_\_\_10

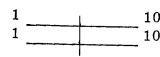
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## SUBSTANCE

RATING

10. The course material was split 50% basic math tools and 50% in commonality subsystems (Those subsystems which are pervasive in designs across disciplines.) The sequence was that recommended by ASEE for math modelling related to several fields. Please rate:

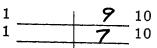
Balance of material Total content



The sequence is given below for each session. Please give your rating for both material content and for the applications given both formally and in the course of concept development.

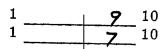
11. Session I; Vectorial Representation; matrices, num. analysis, linear systems, sampling, manipulation

Material Application



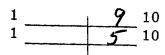
12. Session II; Transforms; convolution, Fourier and Laplace transformations, Z transforms, impulse response, numerical analysis.

Material Application



13. Session III; Probability and Statistics; random var., expectancy, density functions, distributions, confidence limits

Material Application



14. Session IV; Stochastic Variable; stationarity, ergodicity, moments, correlation, power spectral density, white noise, square law detection.

Material Application

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1		6	10

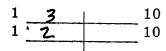
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15. Session V; Signal Detection; value, cost liklihood ratio detection, Bayes Law.

Material
Application

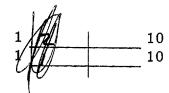
1 5 10

16. Session VI; Detector Subsystems I; receiver operating characteristics, detection situations, S/N ratio, data smoothing and prediction.



17. Session VII; Detector Subsystems II; non-white noise, whitening, matched filtering, threshold, detectability Markov chains.

Material Application



18. Session VIII; Spatial Processing I; space-time relationships, spatial filtering, correlation matrix for signal and noise.

Material Application

T	4	10
1 _	4	10

19. Session IX Spatial Processing II; optimum array, shading, optimum filtering, lobe periodicity.

Material Application

1		10
1		10

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20.	Sessio	n X; Servo	mechanisms	and Con	trol; clos	ed loop :	svstems	š.
regu	lation,	feedback,	root locus,	stability	criteria,	bang-ba	ang syst	tems.

Material Application

1	 <u> </u>	10
1		10

21. Session XI; Modulation; analog modulation, AM, FM, PM, supressed band modulation, effects of index of modulation noise immunity.

NOTATIONDED

Material Application

1	 	10
1		10

22. Session XII; Modulation; PPM, PWM, PCM, error correction codes, noise immunity, entropy. (Content Only)

NOTATIONDED

Material Application

1		10
1		10

Note: O Some time around Session III THE COURSE PHILOSOPHY?

CHANGED FROM FAIRLY WELL PUT TOGETHER LECTURES

BY TO MORE CLASS PARTICIPATION (L.C. QUESTIONS

EXPERIENCES, FEELINGS, ETC.), THIS WAS A MISTAMESTING

MUCH VALUABLE TIME WAS WASTED ON QUESTIONS

REALLY UNDERSTOOD BY A FEW IN CLASS, TIME SHOULD HAVE

BEEN SPENT PRESENTING A CONCISE BODY OF KNOWLEDGE

ETECHNIQUES UNDERSTANDABLE OR AT LEAST LOGICAL) TO MOST

OF THE CLASS. THIS WAS DONE QUITE WELL BY

IN THE EARLIER LECTURES AND I'M SURE HE CONLOHAVE

CONTINUED TO DO SO.

NOTE: O THE COURSE CONTENT, IS SIMILAR TO COURSES AUDILABLE

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HEREFORE

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TFEEL PRESIDENT OF CRESSOR SONT TO EFFICIENT WORK THAN LACK OF

CERTAIN TECHNICAL KNOWLEDGE (WHICH CANBE BASILY CORRECTED

BY SELF-STUDY OR OUTSIDE TECH.)

WHAT IS AVAILABLE ONTS IDE

AVAILABLE ONTS IDE

ONTE ON A MUCH LESS DEPTH) WHAT IS AVAILABLE ONTS IDE

COMMUNICATION OF TWEEN PROBLEM AREAS, DEVELOPMENT

AREAS, FOR PERATIONAL FUNCTIONS. THE GROSS LACK OF

COMMUNICATION BETWEEN VARIOUS OFFILES & DIVISIONS.

APPEARS (AT LEAST TO SOME ONE AT MY LEVEL) TO BE A

MUCH GREATER BARRIER TO EFFICIENT WORK THAN LACK OF

(3) IN ANY COURSE WHERE CLASSES ARE INFREQUENT AND THE
SUBJECT MATTER CHANGES FROM CLASS TO CLASS, IT IS
IMPORTANT THAT NOTES BE DISTRIBUTED PRIOR TO ACLASS AND
THAT THESE NOTES CLEARLY STATE WHAT, WHY I HOW, MATERIAL
WILL BE COVERED NEXT CLASS. THESE NOTES SHOULD
NOT JUST BE "RELATED" TO THE NEXT CLASS BUT SHOULD
BE THE LECTURE OUTLING THAT WILL BE FOLLOWED WHEN
THE STUDENT ARRIVES IN CLASS.

TOO MANY THINGS HAPPEN BETWEEN CLASS MEETINGS
AND TIME IS TOO VALUABLE

NFOR A STUDENT TO HAVE TO WASTE TIME DECIPHERING A

SET OF NOTES THEN FINDOUT THAT THE INSTRUCTOR WON'T

BE USING THEM ANYWAY.

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